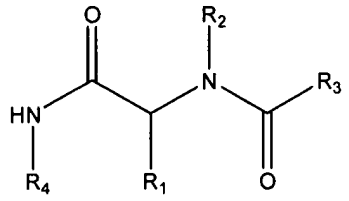
Amendments to the Claims

Please amend Claims 1, 2 and 24-28. The Claim Listing below will replace all prior versions of the Claims in the application.

Claim Listing

What is Claimed is:

1. (Currently Amended) A method of inhibiting rejection of a transplanted organ[[,]] or transplanted tissue ~~or transplanted cell~~ in a subject in need thereof, wherein the transplanted organ or transplanted tissue is heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, or part of heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, said method comprising the step of administering an effective amount of a compound represented by Formula (I):



(I)

or a ~~physiological~~ pharmaceutically acceptable salt thereof, wherein:

R_1 is a substituted or unsubstituted aryl group or a substituted or unsubstituted alkyl group;

R_2 is an optionally substituted aralkyl group or an alkyl group substituted with $-NR_5R_6$;

R_3 is a substituted or unsubstituted alkyl group or a substituted or unsubstituted aryl group;

R_4 a substituted or unsubstituted alkyl group or a substituted or unsubstituted aryl group; and

R_5 and R_6 are independently selected from a substituted or unsubstituted alkyl group or a substituted or unsubstituted aryl group or R_5 and R_6 taken together with the nitrogen to which they are attached are a non-aromatic heterocyclic group;

wherein each substituted aryl group, substituted alkyl group and substituted aralkyl group are independently C-substituted with-OH, -Br, -Cl, -I, -F, R, $-CH_2R$, $-OCH_2R$, $-CH_2OC(O)R$, -OR, -O-COR, -COR, -CN, $-NO_2$, -COOH, $-SO_3H$, $-NH_2$, -NHR, $-N(R)_2$, -COOR, -CHO, $-CONH_2$, -CONHR, $-CON(R)_2$, -NHCOR, -NRCOR, $-NHCONH_2$, -NHCONRH, $-NHCON(R)_2$, $-NRCONH_2$, -NRCONRH, $-NRCON(R)_2$, $-C(=NH)-NH_2$, -C(=NH)-NHR, $-C(=NH)-N(R)_2$, $-C(=NR)-NH_2$, -C(=NR)-NHR, $-C(=NR)-N(R)_2$, $-NH-C(=NH)-NH_2$, -NH-C(=NH)-NHR, $-NH-C(=NH)-N(R)_2$, $-NH-C(=NR)-NH_2$, -NH-C(=NR)-NHR, $-NH-C(=NR)-N(R)_2$, $-NRH-C(=NH)-NH_2$, -NR-C(=NH)-NHR, $-NR-C(=NH)-N(R)_2$, $-NR-C(=NR)-NH_2$, -NR-C(=NR)-NHR, $-NR-C(=NR)-N(R)_2$, $-SO_2NH_2$, $-SO_2NHR$, $-SO_2NR_2$, -SH, $-SO_kR$ or $-NH-C(=NH)-NH_2$; and/or

wherein each substituted aryl group and substituted aralkyl group are independently substituted at a nitrogen atom, if present, with –R', $-N(R')_2$, $-C(O)R'$, $-CO_2R'$, $-C(O)C(O)R'$, $-C(O)CH_2\ C(O)R'$, $-SO_2R'$, $-SO_2N(R')_2$, $-C(=S)N(R')_2$, $-C(=NH)-N(R')_2$, or $-NR'SO_2R'$; and

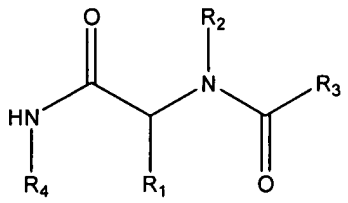
R' is hydrogen, an alkyl group, phenyl, -O(Phenyl), CH_2(Phenyl), heteroaryl or non-aromatic heterocyclic ring;

each R is independently an alkyl, benzyl, or aryl group; or $-N(R)_2$, taken together, forms a non-aromatic heterocyclic group; and

k is 0, 1 or 2.

2. (Currently Amended) A method of inhibiting chronic rejection of a transplanted organ or transplanted tissue in a subject in need thereof, wherein the transplanted organ or transplanted tissue is heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, or part of heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, said method

comprising the step of administering an effective amount of a compound represented by Formula (I):



(I)

or a ~~physiological~~ pharmaceutically acceptable salt thereof, wherein:

R_1 is a substituted or unsubstituted aryl group or a substituted or unsubstituted alkyl group;

R_2 is an optionally substituted aralkyl group or an alkyl group substituted with $-NR_5R_6$;

R_3 is a substituted or unsubstituted alkyl group or a substituted or unsubstituted aryl group;

R_4 a substituted or unsubstituted alkyl group or a substituted or unsubstituted aryl group; and

R_5 and R_6 are independently selected from a substituted or unsubstituted alkyl group or a substituted or unsubstituted aryl group or R_5 and R_6 taken together with the nitrogen to which they are attached are a non-aromatic heterocyclic group;

wherein each substituted aryl group, substituted alkyl group and substituted aralkyl group are independently C-substituted with-OH, -Br, -Cl, -I, -F, R, $-CH_2R$, $-OCH_2R$, $-CH_2OC(O)R$, -OR, -O-COR, -COR, -CN, $-NO_2$, -COOH, $-SO_3H$, $-NH_2$, -NHR, $-N(R)_2$, -COOR, -CHO, $-CONH_2$, -CONHR, $-CON(R)_2$, -NHCOR, -NRCOR, $-NHCONH_2$, -NHCONRH, $-NHCON(R)_2$, $-NRCONH_2$, -NRCONRH, $-NRCON(R)_2$, $-C(=NH)-NH_2$, -C(=NH)-NHR, $-C(=NH)-N(R)_2$, $-C(=NR)-NH_2$, -C(=NR)-NHR, $-C(=NR)-N(R)_2$, $-NH-C(=NH)-NH_2$, -NH-C(=NH)-NHR, $-NH-C(=NH)-N(R)_2$, $-NH-C(=NR)-NH_2$, -NH-C(=NR)-NHR, $-NH-C(=NR)-N(R)_2$, $-NRH-C(=NH)-NH_2$, -NR-C(=NH)-NHR, $-NR-C(=NH)-N(R)_2$, $-NR-C(=NR)-NH_2$, -NR-C(=NR)-NHR, $-NR-C(=NR)-N(R)_2$, $-SO_2NH_2$, $-SO_2NHR$, $-SO_2NR_2$, -SH, $-SO_kR$ or $-NH-C(=NH)-NH_2$; and/or

wherein each substituted aryl group and substituted aralkyl group are independently substituted at a nitrogen atom, if present, with –R', -$N(R')_2$, -C(O)R', -CO_2R', -C(O)C(O)R', -$C(O)CH_2$ C(O)R', -SO_2R', -$SO_2N(R')_2$, -$C(=S)N(R')_2$, -$C(=NH)$-$N(R')_2$, or –NR'SO_2R'; and

R' is hydrogen, an alkyl group, phenyl, -O(Phenyl), CH_2(Phenyl), heteroaryl or non-aromatic heterocyclic ring;

each R is independently an alkyl, benzyl, or aryl group; or -$N(R)_2$, taken together, forms a non-aromatic heterocyclic group; and

k is 0, 1 or 2.

3. (Original) The method of Claim 2 wherein R_2 is an optionally substituted heteroaralkyl group or an alkyl group substituted with -NR_5R_6.

4. (Original) The method of Claim 3 wherein R_4 is an optionally substituted aryl group, an optionally substituted cycloalkyl group, an optionally substituted C_1-C_4 aralkyl group or an optionally substituted C_1-C_4 cycloalkylalkyl group.

5. (Original) The method of Claim 4 wherein R_4 is an optionally substituted phenyl group, an optionally substituted phenyl-C_1-C_4-alkyl group, an optionally substituted diphenyl-C_1-C_4-alkyl group, an optionally substituted C_3-C_8-cycloalkyl-C_1-C_4-alkyl group or an optionally substituted di-(C_3-C_8-cycloalkyl)-C_1-C_4-alkyl group.

6. (Original) The method of Claim 5 wherein R_4 is an optionally substituted benzyl, an optionally substituted diphenylmethyl, an optionally substituted 2-phenylethyl, an optionally substituted 1,2-diphenylethyl, an optionally substituted 2,2-diphenylethyl or an optionally substituted 3,3-diphenylpropyl.

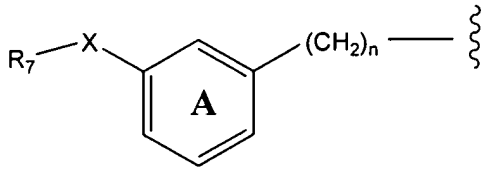
7. (Original) The method of Claim 3 wherein R_1 is an optionally substituted aryl group or an optionally substituted C_1-C_4 aralkyl group.

8. (Original) The method of Claim 7 wherein R_1 is an optionally substituted phenyl group or an optionally substituted phenyl-C_1-C_4 alkyl group.

9. (Original) The method of Claim 3 wherein R_3 is an optionally substituted aryl group or an optionally substituted C_1-C_4 aralkyl group.

10. (Original) The method of Claim 9 wherein R_3 is an optionally substituted phenyl, an optionally substituted phenyl-C_1-C_4-alkyl, an optionally substituted diphenyl-C_1-C_4-alkyl, an optionally substituted pyrazolyl, an optionally substituted pyrazolyl-C_1-C_4-alkyl, an optionally substituted indolyl, an optionally substituted indolyl-C_1-C_4-alkyl, thienylphenyl, thienylphenyl-C_1-C_4-alkyl, furanylphenyl, furanylphenyl-C_1-C_4-alkyl, an optionally substituted fluorenyl, an optionally substituted fluorenyl-C_1-C_4-alkyl, an optionally substituted naphthyl, an optionally substituted naphthyl-C_1-C_4-alkyl, an optionally substituted quinoxalinyl, an optionally substituted quinoxalinyl-C_1-C_4-alkyl, an optionally substituted quinazolinyl, an optionally substituted quinazolinyl-C_1-C_4-alkyl, an optionally substituted pyrolyl, an optionally substituted pyrolyl-C_1-C_4-alkyl, an optionally substituted thienyl, an optionally substituted thienyl-C_1-C_4-alkyl, an optionally substituted furanyl, an optionally substituted furanyl-C_1-C_4-alkyl, an optionally substituted pyridyl or an optionally substituted-C_1-C_4 pyridyl.

11. (Previously Presented) The method of Claim 10 wherein R_3 is represented by the following structural formula:



;

wherein Ring **A** is substituted or unsubstituted; R_7 is an optionally substituted phenyl, optionally substituted furanyl, optionally substituted thienyl or optionally substituted pyridyl group; n is an integer from 1-4; and X is a bond, CH_2, OCH_2, $CH_2OC(O)$, CO, OC(O), C(O)O, O, S, SO or SO_2.

12. (Previously Presented) The method of Claim 3 wherein R_3 is an optionally substituted 2-cyclohexylethyl, an optionally substituted 2-cyclopentylethyl, or an optionally substituted C_3-C_8 secondary or tertiary alkyl group.

13. (Original) The method of Claim 3 wherein R_2 is an optionally substituted 2-(imidazol-4-yl)ethyl, an optionally substituted 3-(imidazol-4-yl)propyl, an optionally substituted 3-(imidazol-1-yl)propyl, an optionally substituted 2-(morpholin-4-yl)ethyl, an optionally substituted 2-(4-pyrazolyl)ethyl, an optionally substituted 2-*N,N*-dimethylaminoethyl or an optionally substituted 3-*N,N*-dimethylaminopropyl.

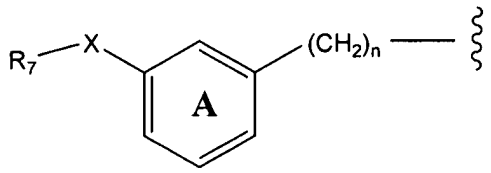
14. (Original) The method of Claim 3 wherein:
    a) R_1 is an optionally substituted aryl group or an optionally substituted C_1-C_4 aralkyl group;
    b) R_3 is an optionally substituted aryl group or an optionally substituted C_1-C_4 aralkyl group; and
    c) R_4 is an optionally substituted aryl group, an optionally substituted cycloalkyl group, an optionally substituted C_1-C_4 aralkyl group or an optionally substituted C_1-C_4 cycloalkylalkyl group.

15. (Original) The method of Claim 3 wherein:
    a) R_1 is an optionally substituted phenyl group or an optionally substituted phenyl-C_1-C_4 alkyl group;
    b) R_3 a substituted or unsubstituted phenyl, phenyl-C_1-C_4-alkyl, diphenyl-C_1-C_4-alkyl, pyrazolyl, pyrazolyl-C_1-C_4-alkyl, indolyl, indolyl-C_1-C_4-alkyl, thienylphenyl, thienylphenyl-C_1-C_4-alkyl, furanylphenyl, furanylphenyl-C_1-C_4-alkyl, fluorenyl, fluorenyl-C_1-C_4-alkyl, naphthyl, naphthyl-C_1-C_4-alkyl, quinoxalinyl, quinoxalinyl-C_1-C_4-alkyl, an optionally substituted quinazolinyl, an optionally substituted quinazolinyl-C_1-C_4-alkyl, pyrolyl, pyrolyl-C_1-C_4-alkyl, thienyl, thienyl-C_1-C_4-alkyl, furanyl or furanyl-C_1-C_4-alkyl; and

c) R_4 is an optionally substituted phenyl group, an optionally substituted phenyl-C_1-C_4-alkyl group, an optionally substituted diphenyl-C_1-C_4-alkyl group, an optionally substituted C_3-C_8-cycloalkyl-C_1-C_4-alkyl group or an optionally substituted di-(C_3-C_8-cycloalkyl)-C_1-C_4-alkyl group.

16. (Original) The method of Claim 15 wherein R_2 is an optionally substituted imadazolyl-C_1-C_4-alkyl group or a C_1-C_4 alkyl group substituted with -NR_5R_6.

17. (Previously Presented) The method of Claim 16 wherein R_3 is represented by the following structural formula:



;

wherein Ring **A** substituted or unsubstituted; R_7 is an optionally substituted phenyl, furanyl, thienyl or pyridyl group; n is an integer from 1-4; and X is a bond, CH_2, OCH_2, $CH_2OC(O)$, CO, OC(O), C(O)O, O, S, SO or SO_2.

18. (Original) The method of Claim 17 wherein R_4 is 2,2-diphenylethyl, 2-phenylethyl, benzyl, diphenylmethyl, 1,2-diphenylethyl, 3,3-diphenylpropyl, benzyl, or 2-pyridylethyl, each optionally substituted with -OH, halogen, R, -CH_2R, -OCH_2R, -$CH_2OC(O)R$, -OR, -O-COR, -COR, -CN, -NO_2, -COOH, -SO_3H, -NH_2, -NHR, -$N(R)_2$, -COOR, -CHO, -$CONH_2$, -CONHR, -$CON(R)_2$, -NHCOR, -NRCOR, -$NHCONH_2$, -NHCONRH, -$NHCON(R)_2$, -$NRCONH_2$, -NRCONRH, -$NRCON(R)_2$, -$C(=NH)$-NH_2, -$C(=NH)$-NHR, -$C(=NH)$-$N(R)_2$, -$C(=NR)$-NH_2, -$C(=NR)$-NHR, -$C(=NR)$-$N(R)_2$, -NH-$C(=NH)$-NH_2, -NH-$C(=NH)$-NHR, -NH-$C(=NH)$-$N(R)_2$, -NH-$C(=NR)$-NH_2, -NH-$C(=NR)$-NHR, -NH-$C(=NR)$-$N(R)_2$, -NRH-$C(=NH)$-NH_2, -NR-$C(=NH)$-NHR, -NR-$C(=NH)$-$N(R)_2$, -NR-$C(=NR)$-NH_2, -NR-$C(=NR)$-NHR, -NR-$C(=NR)$-$N(R)_2$, -SO_2NH_2, -SO_2NHR, -$SO_2N(R)_2$, -SH or -SO_kR;

each R is independently C_1-C_4 alkyl or phenyl optionally substituted with amino, alkylamino, dialkylamino, aminocarbonyl, halogen, alkyl, alkylaminocarbonyl, dialkylaminocarbonyloxy, alkoxy, nitro, cyano, carboxy, alkoxycarbonyl, alkylcarbonyl, hydroxy, haloalkoxy, or haloalkyl; and

k is zero, one or two.

19. (Original) The method of Claim 18 wherein R_1 is a phenyl group or phenyl-C_1-C_4 alkyl group each optionally substituted with R, -CH_2R, -OCH_2R, -$CH_2OC(O)$R, -OH, halogen, -OR, -O-COR, -COR, -CN, -NO_2, -COOH, -SO_3H, -NH_2, -NHR, -$N(R)_2$, -COOR, -CHO, -$CONH_2$, -CONHR, -$CON(R)_2$, -NHCOR, -NRCOR, -$NHCONH_2$, -NHCONRH, -$NHCON(R)_2$, -$NRCONH_2$, -NRCONRH, -$NRCON(R)_2$, -C(=NH)-NH_2, -C(=NH)-NHR, -C(=NH)-$N(R)_2$, -C(=NR)-NH_2, -C(=NR)-NHR, -C(=NR)-$N(R)_2$, -NH-C(=NH)-NH_2, -NH-C(=NH)-NHR, -NH-C(=NH)-$N(R)_2$, -NH-C(=NR)-NH_2, -NH-C(=NR)-NHR, -NH-C(=NR)-$N(R)_2$, -NRH-C(=NH)-NH_2, -NR-C(=NH)-NHR, -NR-C(=NH)-$N(R)_2$, -NR-C(=NR)-NH_2, -NR-C(=NR)-NHR, -NR-C(=NR)-$N(R)_2$, -SO_2NH_2, -SO_2NHR, -$SO_2N(R)_2$, -SH or -SO_kR.

20. (Original) The method of Claim 19 wherein R_1 is a phenyl group or phenyl-C_1-C_2 alkyl group, each optionally substituted with C_1-C_4 alkyl, C_1-C_4 alkoxy, halogen, CN, C_1-C_4-alkylthiol, C_1-C_4-haloalkyl or phenoxy; R_4 is 2,2-diphenylethyl, 2-phenylethyl, benzyl, diphenylmethyl, 1,2-diphenylethyl, 3,3-diphenylpropyl, benzyl, or 2-pyridylethyl, each optionally substituted with C_1-C_4 alkyl, C_1-C_4 alkoxy, halogen, CN, C_1-C_4-alkylthiol, C_1-C_4-haloalkyl or phenoxy; R_7 is an optionally substituted phenyl group; n is 1; and X is CO.

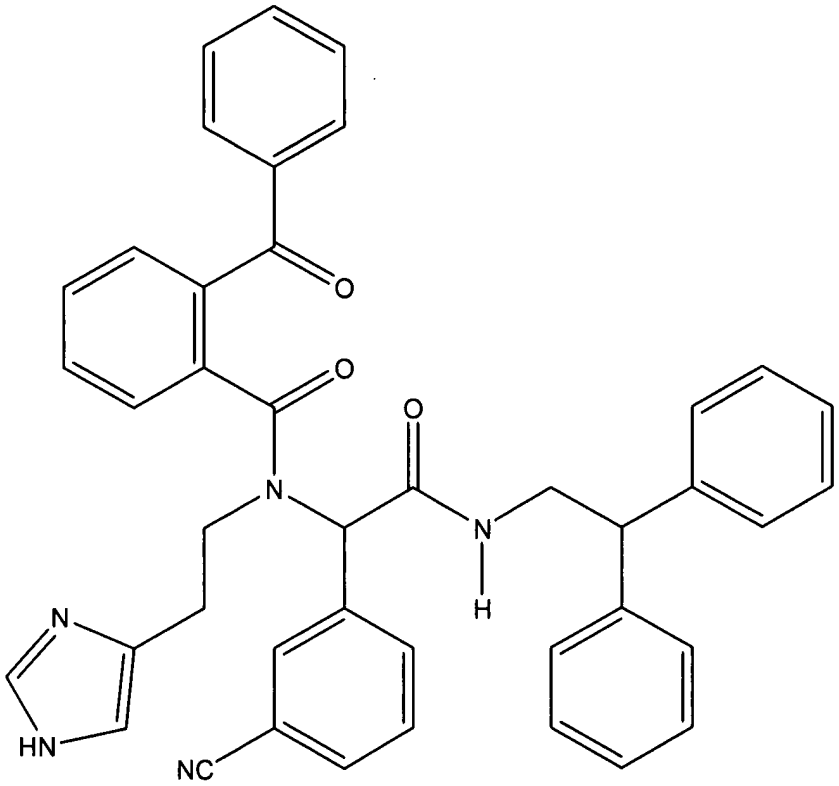
21. (Original) The method of Claim 20 wherein Ring **A** is unsubstituted and R_7 is a phenyl group optionally substituted with R, -CH_2R, -OCH_2R, -$CH_2OC(O)$R, -OH, halogen, -OR, -O-COR, -COR, -CN, -NO_2, -COOH, -SO_3H, -NH_2, -NHR, -$N(R)_2$, -COOR, -CHO, -$CONH_2$, -CONHR, -$CON(R)_2$, -NHCOR, -NRCOR, -$NHCONH_2$, -NHCONRH, -$NHCON(R)_2$, -$NRCONH_2$, -NRCONRH, -$NRCON(R)_2$, -C(=NH)-NH_2, -C(=NH)-NHR,

$-C(=NH)-N(R)_2$, $-C(=NR)-NH_2$, $-C(=NR)-NHR$, $-C(=NR)-N(R)_2$, $-NH-C(=NH)-NH_2$, $-NH-C(=NH)-NHR$, $-NH-C(=NH)-N(R)_2$, $-NH-C(=NR)-NH_2$, $-NH-C(=NR)-NHR$, $-NH-C(=NR)-N(R)_2$, $-NRH-C(=NH)-NH_2$, $-NR-C(=NH)-NHR$, $-NR-C(=NH)-N(R)_2$, $-NR-C(=NR)-NH_2$, $-NR-C(=NR)-NHR$, $-NR^-C(=NR)-N(R)_2$, $-SO_2NH_2$, $-SO_2NHR$, $-SO_2N(R)_2$, -SH or $-SO_kR$.

22. (Original) The method of Claim 21 wherein R_7 is a phenyl group.

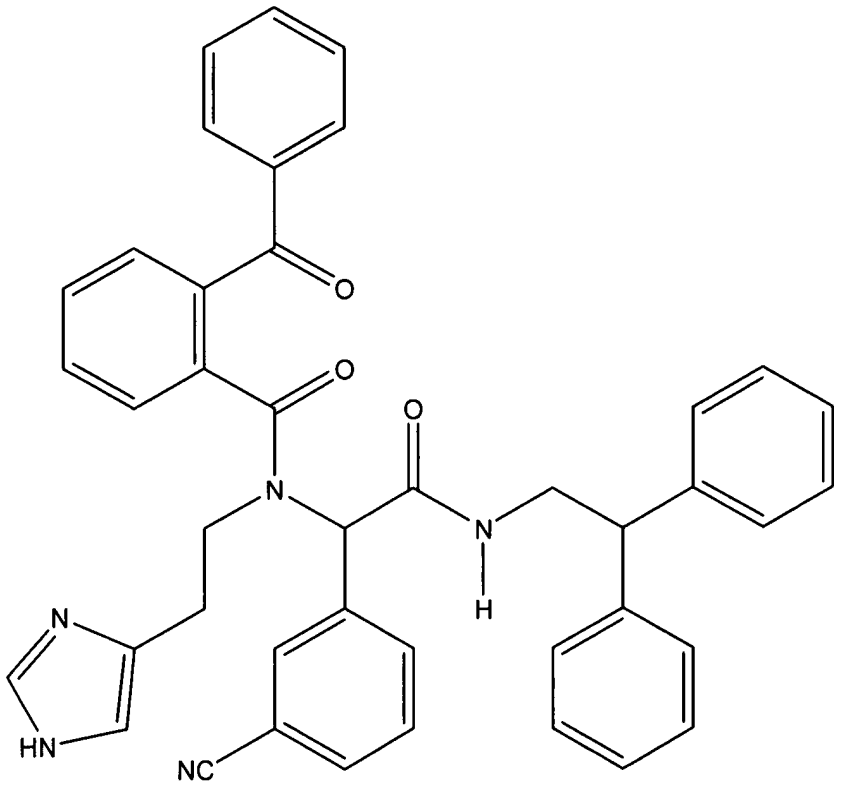
23. (Original) The method of Claim 22 wherein R_2 is 2-(imidazol-4-yl)ethyl.

24. (Currently Amended) A method of inhibiting rejection of a transplanted organ[[,]] or transplanted tissue ~~or transplanted cell~~ in a subject in need thereof, wherein the transplanted organ or transplanted tissue is heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, or part of heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, said method comprising the step of administering an effective amount of a compound represented by the following structural formula:



or a pharmaceutically acceptable salt thereof.

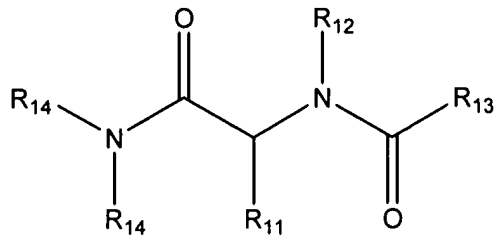
25. (Currently Amended) A method of inhibiting chronic rejection of a transplanted organ or transplanted tissue in a subject in need thereof, wherein the transplanted organ or transplanted tissue is heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, or part of heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, said method comprising the step of administering an effective amount of a compound represented by the following structural formula:



(II).

or a pharmaceutically acceptable salt thereof.

26. (Currently Amended) A method of inhibiting rejection of a transplanted organ[[,]] or transplanted tissue ~~or transplanted cell~~ in a subject in need thereof, wherein the transplanted organ or transplanted tissue is heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, or part of heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, said method comprising the step of administering an effective amount of a compound represented by the following structural formula:



or a ~~physiologically~~ pharmaceutically acceptable salt thereof, wherein:

R_{11} is -H, a substituted or unsubstituted aryl, a substituted or unsubstituted aralkyl, a substituted or unsubstituted heteroaryl or a substituted or unsubstituted heteroaralkyl;

R_{12} is alkyl substituted with $NR_{15}R_{16}$, a substituted or unsubstituted aryl, a substituted or unsubstituted heteroaralkyl, or a substituted or unsubstituted heterocycloalkylalkyl;

R_{13} is a substituted or unsubstituted alkyl, a substituted or unsubstituted aryl, a substituted or unsubstituted aralkyl, a substituted or unsubstituted cycloalkylalkyl, a substituted or unsubstituted heteroaryl, a substituted or unsubstituted heteroaralkyl, a substituted or unsubstituted benzophenonyl, or a substituted or unsubstituted cycloalkylalkyl; and

each R_{14} is independently, -H, a substituted or unsubstituted alkyl, a substituted or unsubstituted aryl, substituted or unsubstituted aralkyl or a substituted or unsubstituted heteroaralkyl;

R_{15} and R_{16} are independently selected from H, a substituted or unsubstituted alkyl, a substituted or unsubstituted cycloalkyl, a substituted or unsubstituted aryl or unsubstituted aralkyl or R_{13} and R_{14} together with the nitrogen to which they are attached are a heterocycloalkyl;

wherein each substituted aryl group, substituted alkyl group and substituted aralkyl group are independently C-substituted with-OH, -Br, -Cl, -I, -F, R, $-CH_2R$, $-OCH_2R$, $-CH_2OC(O)R$, -OR, -O-COR, -COR, -CN, $-NO_2$, -COOH, $-SO_3H$, $-NH_2$, -NHR, $-N(R)_2$, -COOR, -CHO, $-CONH_2$, -CONHR, $-CON(R)_2$, -NHCOR, -NRCOR, $-NHCONH_2$, -NHCONRH, $-NHCON(R)_2$, $-NRCONH_2$, -NRCONRH, $-NRCON(R)_2$, $-C(=NH)-NH_2$, -C(=NH)-NHR, $-C(=NH)-N(R)_2$, $-C(=NR)-NH_2$, -C(=NR)-NHR, $-C(=NR)-N(R)_2$, $-NH-C(=NH)-NH_2$, -NH-C(=NH)-NHR,

-NH-C(=NH)-N(R)$_2$, -NH-C(=NR)-NH$_2$, -NH-C(=NR)-NHR, -NH-C(=NR)-N(R)$_2$, -NRH-C(=NH)-NH$_2$, -NR-C(=NH)-NHR, -NR-C(=NH)-N(R)$_2$, -NR-C(=NR)-NH$_2$, -NR-C(=NR)-NHR, -NR-C(=NR)-N(R)$_2$, -SO$_2$NH$_2$, -SO$_2$NHR, -SO$_2$NR$_2$, -SH, -SO$_k$R or -NH-C(=NH)-NH$_2$; and/or

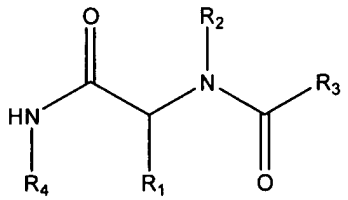
wherein each substituted aryl group and substituted aralkyl group are independently substituted at a nitrogen atom, if present, with –R', -N(R')$_2$, -C(O)R', -CO$_2$R', -C(O)C(O)R', -C(O)CH$_2$ C(O)R', -SO$_2$R', -SO$_2$N(R')$_2$, -C(=S)N(R')$_2$, -C(=NH)-N(R')$_2$, or –NR'SO$_2$R'; and

R' is hydrogen, an alkyl group, phenyl, -O(Phenyl), CH$_2$(Phenyl), heteroaryl or non-aromatic heterocyclic ring;

each R is independently an alkyl, benzyl, or aryl group; or -N(R)$_2$, taken together, forms a non-aromatic heterocyclic group; and

k is 0, 1 or 2.

27. (Currently Amended) A method of inhibiting acute and chronic rejection of a transplanted organ[[,]] or transplanted tissue ~~or transplanted cell~~ in a subject in need thereof, wherein the transplanted organ or transplanted tissue is heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, or part of heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, said method comprising the step of administering an effective amount of a compound represented by Formula (I):



(I)

or a ~~physiological~~ pharmaceutically acceptable salt thereof, wherein:

R_1 is a substituted or unsubstituted aryl group or a substituted or unsubstituted alkyl group;

R_2 is an optionally substituted aralkyl group or an alkyl group substituted with $-NR_5R_6$;

R_3 is a substituted or unsubstituted alkyl group or a substituted or unsubstituted aryl group;

R_4 a substituted or unsubstituted alkyl group or a substituted or unsubstituted aryl group; and

R_5 and R_6 are independently selected from a substituted or unsubstituted alkyl group or a substituted or unsubstituted aryl group or R_5 and R_6 taken together with the nitrogen to which they are attached are a non-aromatic heterocyclic group;

wherein each substituted aryl group, substituted alkyl group and substituted aralkyl group are independently C-substituted with-OH, -Br, -Cl, -I, -F, R, $-CH_2R$, $-OCH_2R$, $-CH_2OC(O)R$, -OR, -O-COR, -COR, -CN, $-NO_2$, -COOH, $-SO_3H$, $-NH_2$, -NHR, $-N(R)_2$, -COOR, -CHO, $-CONH_2$, -CONHR, $-CON(R)_2$, -NHCOR, -NRCOR, $-NHCONH_2$, -NHCONRH, $-NHCON(R)_2$, $-NRCONH_2$, -NRCONRH, $-NRCON(R)_2$, $-C(=NH)-NH_2$, -C(=NH)-NHR, $-C(=NH)-N(R)_2$, $-C(=NR)-NH_2$, -C(=NR)-NHR, $-C(=NR)-N(R)_2$, $-NH-C(=NH)-NH_2$, -NH-C(=NH)-NHR, $-NH-C(=NH)-N(R)_2$, $-NH-C(=NR)-NH_2$, -NH-C(=NR)-NHR, $-NH-C(=NR)-N(R)_2$, $-NRH-C(=NH)-NH_2$, -NR-C(=NH)-NHR, $-NR-C(=NH)-N(R)_2$, $-NR-C(=NR)-NH_2$, -NR-C(=NR)-NHR, $-NR-C(=NR)-N(R)_2$, $-SO_2NH_2$, $-SO_2NHR$, $-SO_2NR_2$, -SH, $-SO_kR$ or $-NH-C(=NH)-NH_2$; and/or

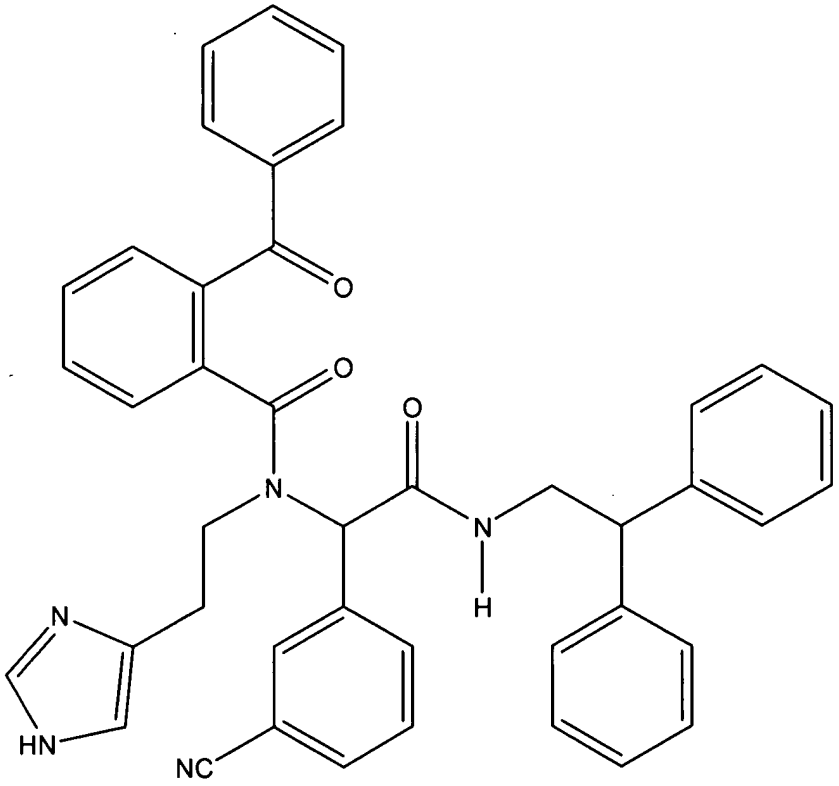
wherein each substituted aryl group and substituted aralkyl group are independently substituted at a nitrogen atom, if present, with –R', $-N(R')_2$, $-C(O)R'$, $-CO_2R'$, $-C(O)C(O)R'$, $-C(O)CH_2C(O)R'$, $-SO_2R'$, $-SO_2N(R')_2$, $-C(=S)N(R')_2$, $-C(=NH)-N(R')_2$, or $-NR'SO_2R'$; and

R' is hydrogen, an alkyl group, phenyl, -O(Phenyl), CH_2(Phenyl), heteroaryl or non-aromatic heterocyclic ring;

each R is independently an alkyl, benzyl, or aryl group; or $-N(R)_2$, taken together, forms a non-aromatic heterocyclic group; and

k is 0, 1 or 2.

28. (Currently Amended) A method of inhibiting acute and chronic rejection of a transplanted organ[[,]] or transplanted tissue ~~or transplanted cell~~ in a subject in need thereof, wherein the transplanted organ or transplanted tissue is heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, or part of heart, kidney, lung, liver, pancreas, pancreatic islets, brain tissue, stomach, large intestine, small intestine, cornea, skin, trachea, muscle or bladder, said method comprising the step of administering an effective amount of a compound represented by the following structural formula:



or a pharmaceutically acceptable salt thereof.